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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Raymond J. Martin

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EXAMINER

SUTHERS, DOUGLAS JOHN

ART UNIT

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2615

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/848,838	Applicant(s) MARTIN ET AL.	
	Examiner Douglas J. Suthers	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-12,15-21,25-32 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-12,15-21,25-32 and 35-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/29/08</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 2-4, 13, 14, 22-24, 33, 34, and 41-43 have been cancelled. Claims 1, 5-12, 15-21, 25-32, and 35-40 remain pending and are addressed in this office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 10, 12, 18, 27, 30, 38, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 7 and 27, the claims recite the limitation “a third frequency range in which the frequencies are more than twice the frequencies of the second frequency range”. It is unclear in what dimension the ranges are being compared, (i.e. bandwidth, center frequency, extreme frequencies).

Claims 7 and 27 recite the limitation "the frequencies" in the phrase: “in which the frequencies are more than twice”. It is unclear to which frequencies are being referred.

Regarding claims 10 and 30, the claims recite the limitation “in which the frequencies in the first frequency range are more than four times the frequencies in the

second frequency range". It is unclear in what dimension the ranges are being compared, (i.e. bandwidth, center frequency, extreme frequencies).

Claim 12 recites the limitation "and also including frequencies of normal human speech". It is unclear whether this is intended to be an added thing the "sound detector" is adapted to do or if it further defines the third frequency range.

Regarding claims 18 and 38, the claims recite the limitation "in which the frequencies in the second frequency range are more than four times the frequencies in the first frequency range". It is unclear in what dimension the ranges are being compared, (i.e. bandwidth, center frequency, extreme frequencies).

Claim 40 recites the limitation "the filtered first sound signal". There is insufficient antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "the filtered second sound signal". There is insufficient antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "when the first control signal is produced". However a previous limitation apparently says that the control signal is continuously produced. It is unclear which is incorrect. Please note that the term "when" only signifies that they may occur at the same time, not that event happens in response to another event.

Claim 40 recites the limitation "when the second control signal is produced". However a previous limitation apparently says that the control signal is continuously produced. It is unclear which is incorrect. Please note that the term "when" only

signifies that they may occur at the same time, not that event happens in response to another event.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 8, 9, 11, 12, 15-17, 19-21, 25, 26, 28, 29, 31, 32, 35-37, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hampton et al. (US 6149490) in view of Ngai (US 5619383).

Regarding claim 1, Hampton discloses a toy comprising:

a body (figure 2, item 12);

a signal detector (figure 44, items 1010 and 1008) adapted to detect signals in at least a first frequency range above normal human speech (IR, 1008), to detect sound in a second frequency range different than the first frequency range and that includes frequencies of normal human speech (1010) ; and

an output apparatus mounted in the body and adapted to produce a corresponding first sensible action when a signal is detected in the first frequency range

(speaker 1052 converses, column 3 line 53 to column 4 line 22) and a corresponding second sensible action when sound is detected in the second frequency range (foot taps, column 3 line 53 to column 4 line 22).

Hampton does not expressly disclose wherein all ranges are sound signals.

Ngai discloses a sound detector (figure 1, input to 40) adapted to detect signals in at least a first frequency range above normal human speech (44 filters out ultra sonic data signal), to detect sound in a second frequency range different than the first frequency range and that includes frequencies of normal human speech (44 filters out ultra sonic data signal) and to reject sound frequencies in frequency range between the first and second ranges (figure 3, frequencies between f_h and f_{cr} minus delta are rejected).

Although Ngai does not expressly disclose the rejected frequencies including frequencies of normal human speech, it would be an obvious design choice to do have such, if the delivered signal were not the full audible bandwidth (i.e. telephone generally delivers up to 1150 Hz) and thus such frequencies were in the noise portion of the provided signal. The motivation to filter such would have been to allow for maximum noise rejection, using only the signal portions. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to and to reject sound frequencies in a third frequency range between the first and second ranges and also including frequencies of normal human speech.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the communication link of Ngai in the system of Hampton. The

motivation for doing so would have been eliminating the need for IR transmitters and receivers, thereby reducing costs. Therefore, it would have been obvious to combine Ngai with Hampton to obtain the invention as specified in claim 1.

Regarding claims 5, 6, 8, and 9, the combination of Hampton and Ngai teach that two distinct frequency ranges can be used to create two communication channels and that sound signals may be used for both. Although they do not disclose the exact claimed frequency ranges it would have been obvious to one of ordinary skill in the art use frequency ranges that have some separation between them, and to filter out all frequencies in those ranges of interest. The motivation to do so would have been to allow for a clear distinction between the two communication channels, and to reduce noise created by neighboring frequencies. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to further comprise the limitations of claims 5, 6, 8, and 9.

Regarding claim 11, Hampton discloses in which the body includes at least one movable part (foot), and in which the sensible action includes one or more of illuminating a light, producing a sound (converses), and moving the at least one movable part.

Regarding claim 12, Hampton discloses a toy comprising:
a body (figure 2, item 12);

a signal detector (figure 44, items 1010 and 1008) adapted to detect signals in a first frequency range that includes frequencies of normal human speech (1010) and a second frequency range that includes frequencies above normal human speech (1008); and

an output apparatus mounted in the body and configured to produce at least a first sensible action when the detected signal is determined to be in either of the first and second frequency ranges (foot taps, column 3 line 53 to column 4 line 22, speaker 1052 converses, column 3 line 53 to column 4 line 22).

Hampton does not expressly disclose wherein all ranges are sound signals.

Ngai discloses a sound detector (figure 1, input to 40) adapted to detect sound in a first range (42 filters out audio signal) that includes frequencies of normal human speech and a second frequency range (44 filters out ultra sonic data signal) that includes frequencies above normal human speech and to reject sound frequencies in a third frequency range between the first and second ranges (figure 3, frequencies between f_h and f_c minus δ are rejected).

Although Ngai does not expressly disclose the rejected frequencies including frequencies of normal human speech, it would be an obvious design choice to do have such, if the delivered signal were not the full audible bandwidth (i.e. telephone generally delivers up to 1150 Hz) and thus such frequencies were in the noise portion of the provided signal. The motivation to filter such would have been to allow for maximum noise rejection, using only the signal portions. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to and to reject sound

frequencies in a third frequency range between the first and second ranges and also including frequencies of normal human speech.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the communication link of Ngai in the system of Hampton. The motivation for doing so would have been eliminating the need for IR transmitters and receivers, thereby reducing costs. Therefore, it would have been obvious to combine Ngai with Hampton to obtain the invention as specified in claim 12.

Regarding claims 15-17, the combination of Hampton and Ngai teach that two distinct frequency ranges can be used to create two communication channels and that sound signals may be used for both. Although they do not disclose the exact claimed frequency ranges it would have been obvious to one of ordinary skill in the art use frequency ranges that have some separation between them, and to filter out all frequencies in those ranges of interest. The motivation to do so would have been to allow for a clear distinction between the two communication channels, and to reduce noise created by neighboring frequencies. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to further comprise the limitations of claims 15-17.

Regarding claim 19, Hampton discloses further comprising at least one movable part (foot), and in which the sensible action includes one or more of illuminating one or

more lights, producing one or more sounds, and moving the at least one movable part (moving foot).

Regarding claim 20, Hampton discloses a toy comprising:

a body (figure 2, item 12);

a signal receiver (figure 44, items 1010 and 1008) mounted in the body and adapted to receive sounds in a first sound frequency range including sounds having frequencies between at least about 1 kHz and 10 kHz (1010);

a first sound analyzer (figure 43, item 1002, portion responsive to SND signal) coupled to the signal receiver and adapted to produce a first control signal indicative of sound received in a second sound frequency range below about 2 kHz;

a second analyzer coupled (1002, portion responsive to IR-RX signal) to the signal receiver and adapted to produce a second control signal indicative of signals received in a third frequency range above about 5 kHz;

a first output device (foot taps, column 3 line 53 to column 4 line 22) mounted in the body, responsive to the first control signal, and adapted to produce a corresponding first sensible action when sound in the second frequency range is received; and

a second output device (speaker 1052 converses, column 3 line 53 to column 4 line 22) mounted in the body, responsive to the second control signal, and adapted to produce a second sensible action when sound in the third frequency range is received.

Hampton does not expressly disclose wherein all ranges are sound signals.

Ngai discloses a sound detector (figure 1, input to 40) adapted to receive sound in a first range that includes frequencies between about 1 kHz and 10 kHz (input to 40 gets full bandwidth);

a first (44) and second (44) sound analyzer that produce control signals indicative of sound received in sound ranges, and rejecting the frequencies in-between ranges (figure 3, frequencies between f_h and f_{cr} minus δ are rejected).

Although Ngai does not expressly disclose the rejected frequencies as claimed, it would be an obvious design choice to do have such, if the delivered signal were not the full audible bandwidth (i.e. telephone generally delivers up to 1150 Hz) and thus such frequencies were in the noise portion of the provided signal. The motivation to filter such would have been to allow for maximum noise rejection, using only the signal portions. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to and to reject sound frequencies in a third frequency range between the first and second ranges and also including frequencies of normal human speech.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the communication link of Ngai in the system of Hampton. The motivation for doing so would have been eliminating the need for IR transmitters and receivers, thereby reducing costs. Therefore, it would have been obvious to combine Ngai with Hampton to obtain the invention as specified in claim 20.

Regarding claim 21, Hampton discloses a method of operating a toy having a body (figure 2, item 12), comprising:

detecting signals (figure 44, items 1010 and 1008) in at least a first frequency range above normal human speech (IR, 1008), detecting sound in a second frequency range different than the first frequency range and that includes frequencies of normal human speech (1010) ;

producing a corresponding first sensible action in the body when signals are detected in the first frequency range (speaker 1052 converses, column 3 line 53 to column 4 line 22); and

producing a corresponding second sensible action in the body when sound is detected in the second frequency range (foot taps, column 3 line 53 to column 4 line 22).

Hampton does not expressly disclose wherein all ranges are sound signals.

Ngai discloses detecting sound (figure 1, input to 40) in at least a first frequency range above normal human speech (44 filters out ultra sonic data signal), detecting sound in a second frequency range different than the first frequency range and that includes frequencies of normal human speech (44 filters out ultra sonic data signal) and rejecting frequencies in frequency range between the first and second ranges (figure 3, frequencies between f_h and $f_{cr} - \Delta$ are rejected).

Although Ngai does not expressly disclose the rejected frequencies including frequencies of normal human speech, it would be an obvious design choice to do have such, if the delivered signal were not the full audible bandwidth (i.e. telephone generally

delivers up to 1150 Hz) and thus such frequencies were in the noise portion of the provided signal. The motivation to filter such would have been to allow for maximum noise rejection, using only the signal portions. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to and to reject sound frequencies in a third frequency range between the first and second ranges and also including frequencies of normal human speech.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the communication link of Ngai in the system of Hampton. The motivation for doing so would have been eliminating the need for IR transmitters and receivers, thereby reducing costs. Therefore, it would have been obvious to combine Ngai with Hampton to obtain the invention as specified in claim 21.

Regarding claims 25, 26, 28, and 29, the combination of Hampton and Ngai teach that two distinct frequency ranges can be used to create two communication channels and that sound signals may be used for both. Although they do not disclose the exact claimed frequency ranges it would have been obvious to one of ordinary skill in the art use frequency ranges that have some separation between them, and to filter out all frequencies in those ranges of interest. The motivation to do so would have been to allow for a clear distinction between the two communication channels, and to reduce noise created by neighboring frequencies. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to further comprise the limitations of claims 25, 26, 28, and 29.

Regarding claim 31, Hampton discloses in which the body includes at least one movable part (foot), and in which the sensible action includes one or more of illuminating a light, producing a sound (converses), and moving the at least one movable part.

Regarding claim 32, Hampton discloses method of operating a toy having a body, the method comprising:

detecting frequencies (figure 44, items 1010 and 1008) in a first frequency range that includes frequencies of normal human speech (1010) and a second frequency range that includes frequencies above normal human speech (IR, 1008); and

producing in the body at least a first sensible action when the detected signal is determined to be in either of the first and second frequency ranges (foot taps, column 3 line 53 to column 4 line 22, speaker 1052 converses, column 3 line 53 to column 4 line 22).

Hampton does not expressly disclose wherein all ranges are sound signals.

Ngai discloses detecting sound (figure 1, input to 40) in a first range (42 filters out audio signal) that includes frequencies of normal human speech and a second frequency range (44 filters out ultra sonic data signal) that includes frequencies above normal human speech and rejecting sound frequencies in a third frequency range between the first and second ranges (figure 3, frequencies between f_h and f_{cr} minus delta are rejected).

Although Ngai does not expressly disclose the rejected frequencies including frequencies of normal human speech, it would be an obvious design choice to do have such, if the delivered signal were not the full audible bandwidth (i.e. telephone generally delivers up to 1150 Hz) and thus such frequencies were in the noise portion of the provided signal. The motivation to filter such would have been to allow for maximum noise rejection, using only the signal portions. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to and to reject sound frequencies in a third frequency range between the first and second ranges and also including frequencies of normal human speech.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the communication link of Ngai in the system of Hampton. The motivation for doing so would have been eliminating the need for IR transmitters and receivers, thereby reducing costs. Therefore, it would have been obvious to combine Ngai with Hampton to obtain the invention as specified in claim 32.

Regarding claims 35-37, the combination of Hampton and Ngai teach that two distinct frequency ranges can be used to create two communication channels and that sound signals may be used for both. Although they do not disclose the exact claimed frequency ranges it would have been obvious to one of ordinary skill in the art use frequency ranges that have some separation between them, and to filter out all frequencies in those ranges of interest. The motivation to do so would have been to allow for a clear distinction between the two communication channels, and to reduce

noise created by neighboring frequencies. Therefore at the time of invention, it would have been obvious to one of ordinary skill in the art to further comprise the limitations of claims 35-37.

Regarding claim 39, Hampton discloses wherein the body includes at least one movable part (foot), and wherein the sensible action includes one or more of illuminating one or more lights, producing one or more sounds, and moving the at least one movable part (moving foot).

Response to Arguments

Applicant's arguments filed June 9th, 2008, with respect to the rejection(s) of claim(s) 21-40 under U.S.C. 103(a) have been fully considered and are persuasive. The method claims do not have the exact limitations of the apparatus claims. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of recited art as above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Suthers whose telephone number is (571)272-0563. The examiner can normally be reached on Monday-Friday 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Douglas J Suthers/
Examiner, Art Unit 2615

/Suhan Ni/
Primary Examiner, Art Unit 2614